LISTING OF CLAIMS

This listing of clams will replace all prior versions and listings of claims in the application.

1. (Currently Amended) [[-]] Method for channel allocation in an ad-hoc radio communication system comprising devices having an equivalent communication architecture, the devices being gathered in several piconets, the devices of a same piconet being able to directly communicate with one another, a piconet coordinator (PNC) being defined among the devices for forming each piconet, the multiple access scheme for the radio communication between the devices being based on [[a]] Code Division Multiple Access (CDMA) scheme, characterized in that the wherein a set of available CDMA codes is split into pre-defined disjoined subsets of CDMA codes (C_i), all the subsets of CDMA codes (C_i) being known by each device, and all the devices of a same piconet using CDMA codes in the same associated subset of codes (C_i) for communicating with one another, and in that for each new device added [[in]] to the ad-hoc radio communication system, it includes the following steps the method comprises:

[[-]] the each new device scans scanning its radio environment looking for at least one used subset of CDMA codes (C_i) which is associated with an existing to a piconet,

[[-]]depending on the or each found used subset of codes (C_i)[[:]]

making the new device becomes a piconet coordinator (PNC) of a new piconet and selects selecting a subset of CDMA codes (C_i) for use in the new piconet if no used subset or subsets of CDMA codes (Ci) are found by the scanning, or

joining the new device decides to join into an existing piconet among a set of available piconets[[,]] found by the scanning to be using an existing the subset of CDMA codes (C_i), of which is already used and uses using said existing subset of CDMA codes (C_i)

for the next communications ~~with~~ between the new device and the other devices of the ~~joined~~ existing piconet that is joined.

2. (Currently Amended) [[-]]Method according to claim 1, ~~characterized in that~~ further comprising defining a broadcast code (C_i^{bc}) ~~is defined~~ in each subset of CDMA codes (C_i) ~~for~~ permitting the piconet coordinator (PNC) to broadcast information towards all the devices of the associated piconet ~~and in that~~ wherein the scanning of the radio environment by each new device ~~added in the ad-hoc radio communication system listens to the radio environment~~ is performed by looking for ~~a or each~~ any CDMA broadcast code (C_i^{bc}) for determining that at least one ~~or each~~ at used subset of CDMA codes (C_i) which is associated with an existing piconet is present.

3. (Currently Amended) [[-]]Method according to any one of the preceding claims, ~~characterized in that~~ wherein, if the new device scanning its radio environment determines ~~found at least~~ one or more subsets ~~used subset~~ of CDMA codes (C_i) are being used by a set of ~~associated to a piconet~~[[,]] existing piconets corresponding to each subset of CDMA codes (C_i) being used, the new device determines availability of each of the existing piconets corresponding to each subset of CDMA codes (C_i) being used based on applying an availability criteria[[,]] ~~the set of available piconets among the piconets associated to the or each found used subset of codes (C_i), and in that the set of available piconets only contains the piconets which complies with the availability criteria~~.

4. (Currently Amended) [[-]]Method according to claim 3, ~~characterized in that~~ wherein the availability criteria is based on the load of the piconet.

5. (Currently Amended) [[-]]Method according to <u>claim 2</u> ~~any one of the preceding~~ ~~claims,~~ <u>wherein</u> ~~characterized in that~~[[:]]

[[-]]if ~~the set of available piconets is empty~~ <u>none of the existing piconets</u> <u>corresponding to each subset of CDMA codes (C_i) being used is determined to meet the</u> <u>availability criteria, designating</u> the new device <u>as</u> ~~becomes~~ a piconet coordinator (PNC) of a new piconet and ~~selects~~ <u>selecting</u> a not yet used subset of <u>CDMA</u> codes (C_i) for <u>use in</u> the new piconet,

[[-]]if ~~the set of available piconets contains~~ <u>only</u> a single piconet <u>corresponding to</u> <u>each subset of CDMA codes (C_i) being used is determined to meet the availability criteria,</u> <u>adding</u> the new device ~~joins~~ <u>to</u> said single piconet and uses the subset of <u>CDMA</u> codes (C_i) of said single piconet for the next communications[[;]]<u>,</u> and

[[-]]if ~~the set of available piconets contains at least two piconets~~ <u>more than one</u> <u>existing piconet corresponding to each subset of CDMA codes (C_i) being used is determined</u> <u>to meet the availability criteria, ordering the more than one existing piconet corresponding to</u> <u>each subset of CDMA codes (C_i) being used into a set of ordered available piconets</u> ~~are~~ ~~ordered~~ according to a predetermined criteria and <u>adding</u> the new device ~~joins~~ <u>to</u> the first available piconet in the set of ordered available piconets.

6. (Currently Amended) [[-]]Method according to claim 5, ~~characterized in that~~ <u>wherein</u> said criteria is ~~the~~ radio quality.

7. (Currently Amended) [[-]]Method according <u>claim 2</u> ~~any one of the preceding~~ ~~claims,~~ <u>wherein</u> ~~characterized in that, when joining~~ <u>adding the new device to</u> an existing piconet[[,]] <u>includes</u> the new device ~~sends~~ <u>sending</u> a request for attachment to the piconet coordinator (PNC) of the <u>existing</u> piconet <u>being joined by the new device</u> and on ~~reception of~~

receiving said request for attachment, the piconet coordinator (PNC) of the existing piconet sends to the new device sending an indication of a CDMA reception code (C_i^j) among the subset of CDMA codes (C_i) associated to with the existing piconet to the new device and the new device using[[,]] the CDMA reception code (C_i^j) being to be used by the new device for reception of data.

8. (Currently Amended) [[-]]Method according to claim 7, characterized in that wherein said indication of the CDMA reception code (C_i^j) to be used for reception of data is a pointer on of 8 bits as defined in 802.15.3 standard, said pointer indicating the CDMA reception code (C_i^j) as known by the new device.

9. (Currently Amended) [[-]]Method according to any one of claims claim 7 and 8, wherein characterized in that, after a new device has joined a an existing piconet, the piconet coordinator (PNC) of the existing piconet sends[[,]] to all the devices of the piconet[[,]] sending an identification of the new device together with an indication of the reception code (C_i^j) to be used for reception by the new device to the other devices of the existing piconet.

10. (Currently Amended) [[-]]Method according to any one of the preceding claims, characterized in that claim 7, wherein, when a given device is sending data with a given reception CDMA code (C_i^j) to another an expected receiving device in the same piconet, the given [[a]] device also sends sending attributes relating to the expected receiving device[[,]] and in that the expected receiving device[[,]] having the given reception CDMA code (C_i^j) of which is the given reception code (C_i^j)[[,]] processes processing the sent data only if the sent attributes relate to it.

11. (Currently Amended) [[-]]~~Device for~~ A particular device configured to be used in an ad-hoc radio communication system[[,]] ~~said system comprising~~ made up of the particular device and other devices having an equivalent communication architecture, the particular device and the other devices being configured to be gathered in several piconets, ~~the~~ each device being able to directly communicate with other devices of a same piconet by implementing a Code Division Multiple Access (CDMA) transmission method, ~~characterized in that~~ wherein the set of available codes is split into pre-defined disjoined subsets of CDMA codes (C_i)[[,]] ~~the~~ and each device comprises means in which all the subsets of CDMA codes (C_i) are stored, and ~~the~~ each device is adapted to use the CDMA codes from a subset of CDMA codes (C_i) associated [[to]] with a particular piconet for communicating with other devices of the particular piconet, and in that the particular device includes:

[[-]]means for scanning the radio environment looking for at least one used subset of CDMA codes (C_i) ~~which is~~ associated ~~to a~~ with an existing piconet when the particular device is added in to the ad-hoc radio communication system, and

[[-]]means for:

[[-]]becoming a piconet coordinator (PNC) of a new piconet and for selecting a subset of CDMA codes (C_i) for the new piconet if no use of at least one of the subset of CDMA codes (C_i) is determined to be present as a result of the scan performed by the means for scanning, or

[[-]]joining an existing piconet among a set of available piconets[[,]] all of which are determined to be using ~~the~~ at least one of the subset of CDMA codes (C_i) as a result of the scan performed by the means for scanning ~~of which is already used~~ and for using said at least one used subset of CDMA codes for the next communications with other devices of the joined existing piconet[[,]] ~~depending on the or each found used set of codes (C_i).~~

12. (Currently Amended) [[-]]Ad-hoc radio communication system comprising devices having an equivalent communication architecture, the devices being gathered in several piconets, the devices of a same piconet all being able to directly communicate with one another, each piconet including a piconet coordinator (PNC), the multiple access scheme for the radio communication between the devices being a Code Division Multiple Access (CDMA) scheme, ~~characterized in that~~ wherein the set of available codes is split into pre-defined disjoined subsets of CDMA codes (C_i), all the subsets of CDMA codes (C_i) being known by each device, and all the devices of a same piconet using CDMA codes in the same associated subset of CDMA codes (C_i) for communicating with one another, and in that each device includes:

[[-]]means for scanning the radio environment looking for at least one used subset of CDMA codes (C_i) which is associated ~~to a~~ with an existing piconet when the device is added in the ad-hoc radio communication system, and means for:

[[-]] becoming a piconet coordinator (PNC) of a new piconet and for selecting a subset of CDMA codes (C_i) for the new piconet if no existing piconet is determined to be using at least one of the subset of CDMAcodes (C_i) as a result of the scan performed by the means for scanning, or

[[-]] joining an existing piconet among a set of available piconets[[,]] all of which are determined to be using ~~the~~ at least one of the subset of CDMA codes (C_i) as a result of the scan performed by the means for scanning ~~of which is already used~~ and for using said at least one used subset of CDMA codes for the next communications with other devices of the joined existing piconet[[,]]

~~depending on the or each found used set of codes (C_i).~~

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